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A RECORD OF YOUNG TARPON

So little is known regarding the life history of the tarpon that the following note should be on record.

In November, 1920, the Bureau of Fisheries received from Mr. James Mallon of Dauphin Island, Mobile County, Alabama, a young tarpon which was submitted at the instance of Mr. William Holabird. The specimen was 25 cm. in length and from an examination of its scales, which showed no trace of a winter ring, Mr. W. W. Welsh tentatively concluded that it was less than one year old. Further information was furnished by Mr. Mallon through Mr. Holabird in a letter which, slightly edited, is as follows:

"The little ones I caught last year were taken somewhere about the middle of January. Some of them were 6 to 8 inches and were caught on the south side of Dauphin Island in the Gulf of Mexico. I killed them with a stick as they were running along the beach. I killed seven of them, the smallest 6 inches and the biggest 8 inches long. The one I sent was killed with an oar at the entrance of Dauphin Bay on November 19, 1920. As to the age of the fish, it must be a year, as I think."

In his book entitled "The Tarpon" (1920) Dr. Louis L. Babcock has well summarized the available data regarding the capture of young individuals of this species. It may be inferred that there is not a previous record of the capture of so small an example of tarpon on the northern shore of the Gulf of Mexico.

The smallest specimens of record are those taken by Evermann and others in a shallow brackish pool in Porto Rico in February, 1899.

R. E. COKER,
U. S. Bureau of Fisheries.

BREEDING DATES OF *Ambystoma maculatum*
AT RALEIGH, N. C.

The Spotted Salamander, (*Ambystoma maculatum* Shaw, *punctatum* Auct.) breeds here every spring; still I have only found the eggs in two localities but have had them brought in from a third. These three spots are widely separated and the restriction of the animal to these few spots in the breeding season would seem to show that its range here was either very restricted or else that it was very particular in its choice of a breeding place. The chief breeding place or rather the one longest known to me is a small pond formed by feeble springs trickling in from the surrounding woods and in this place I have known them to breed now for 29 years.

The following are noted dates and all refer to this one pool, except when otherwise stated.

- 1893. March 17, 21. Stage of eggs not noted.
- 1894. February 9. Stage of eggs not noted.
- 1902. February 26. Eggs and adults.
- 1903. February 7. Eggs and adults.
- 1904. February. Eggs and adults.
- 1905. February 22. Eggs and adults.
- 1910. February 10. Twelve adults brought in presumably breeding.
- 1912. March 1. First eggs of year.
- 1913. February 1. First eggs of year.
- 1914. January 29. Adults and eggs.
- 1915. February 2. Adults and eggs.
- 1916. January 31. Adults and fresh eggs.



1917. February 16. Adults and eggs. About two-thirds of the eggs were freshly laid, the others possibly a week old.

1918. February 13. Four bunches freshly laid eggs.

1919. February 1. Seven egg masses, some newly laid, some several days old.

1920. February 14. One egg mass, fresh in pool by railroad. February 21, ten egg masses in old pool, mostly fresh, some about a week old.

1921. February 12. About eight egg masses in pools by railroad, some fresh, some a week or more old.

From the preceding data it will be seen that these salamanders normally lay their eggs in this locality during February and usually before the middle of the month. One lot of eggs found on February 22, 1905, deserves note, as instead of being laid in the water, they were laid among wet dead leaves lying just above the level of the water beneath a dead log which lay part in and part out of the water. The albumen around these eggs had swollen up into an irregular mass around each egg, but each egg was distinct and not united to any other, thus the group presented an intermediate stage between the normal condition of the eggs of *maculatum* and those of *opacum*.

The maculation of these animals varies very much, the total number of yellow spots varying from 15 to 52 in animals examined by me, while I have seen one specimen that had none at all.

C. S. BRIMLEY,
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NOTES ON SEBASTODES

1. A second record of *Sebastes atrorubens* Gilbert.

Another specimen of this rock-cod, hitherto known only from the type, "probably from Monterey," was secured by the writer from a Chinese fisherman, who

caught it near the southern end of Monterey Bay, California; it is deposited in the fish collection of the Museum of Zoology, of the University of Michigan.

2. The food of *Sebastodes auriculatus* Girard.

The stomach contents of a box of this species, caught over a sand-shell bottom about twenty meters deep, off Pismo Beach, California, upon examination were found to consist of: two young rays (*Raja bin-oculata*); one example of *Otophidium taylori*, and remains of other fishes; many shrimps, and three species of crabs; one clam (*Siliqua*), and a small starfish.

CARL L. HUBBS,
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RECORDS OF PACIFIC FISHES

A pearl fish, *Fierasfer dubius* Putnam, encrusted in mother of pearl, was brought into San Diego lately from a point "150 miles southwest of Point Loma." A head fish, *Mola mola*, was lately taken off the Island of Kauai, the first record from the Hawaiian Islands.

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